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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,026	08/20/2003	Michio Arai	66361-060-7	3845

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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,026

Applicant(s)

ARAI, MICHIO

Examiner

Ula C. Ruddock

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Examiner has carefully considered Applicant's response filed October 19, 2005. The rejections have been maintained.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 58-083420 (JP '420) in view of Cordova et al. (US 6,276,254). JP '420 discloses a safety helmet comprising an inner and outer layer having an epoxy resin having glass fibers (i.e. fiber reinforced panels). The inner layer is made of three layers of non-woven fabric having resin coated between the layers to make an integral resin immersed non-woven fabric. JP '420 discloses the claimed invention except for the teaching that a net member is located between the first and second nonwoven layers.

Cordova et al. (US 6,276,254) disclose armor systems used in helmets (col 1, ln 56). The armor system comprises first and second layers. The first layer comprises a plurality of networks selected from the group consisting of an uncoated nonwoven network of randomly oriented fibers and an uncoated knitted, preferably tightly network of fibers. The second layer comprises a plurality of networks selected from the group consisting of a loosely woven network of fibers, an open knitted network of fibers, a braided network of fibers, and a nonwoven network of oriented fibers (col 3, ln 33-42). It should be noted that the Examiner is equating Cordova's open knitted network of fibers to a scrim. The fibers can be thermoplastic (i.e. polyester and polyolefins) and

thermosetting (i.e. phenolics and epoxies) col 5, ln 22-25). In another embodiment, the first layer can comprise a plurality of networks selected from the group consisting of an uncoated nonwoven network of randomly oriented fibers and an uncoated, open knitted network of fibers (col 10, ln 48-52). It would have been obvious to one having ordinary skill in the art to have used Cordova's open knitted thermosetting or thermoplastic fibers in between the first and second nonwoven layers of the intermediate layer of JP '420, motivated by the desire to create a helmet having increased strength and puncture resistance.

Rejection is maintained.

Response to Arguments

4. Applicant's arguments filed October 19, 2005, have been fully considered but they are not persuasive for the reasons set forth. Applicant argues that it would not have been obvious to utilize Cordova's open knitted fibers between the first and second non-woven layers of JP '420 because Cordova discloses that the layers be pliable. This argument is not persuasive because only the net material of Cordova is being used between the nonwoven layers of JP '420, not the entire pliable laminate of Cordova. Furthermore, it has been held that the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek*, 163 USPQ 545 (CCPA 1969). Finally, JP '420 does not require that the laminate be pliable.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C. Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR



Wla C. Ruddock

Primary Examiner

Tech Center 1700